companies comprising the Dow Jones Industrial Average and selected groups of utility companies. He concluded that a modest adjustment for risk in the DCF model would produce a required rate of return between 15 percent and 23 percent.

Staff points out that Value Line's projections are short term and that Dr. Soldofsky "tempered" them with his "own professional judgment." (S. Br. 126). Staff also notes that Dr. Soldofsky's methodology "produces the perverse result of having the investor require a higher return on the less risky assets and vice versa."

3. Market risk allowance.

Dr. Soldofsky examined an institutional investor survey which asked what rate of return on common stock would be attractive when AA utility bonds are yielding an 8-1/2 percent (1978) or 9-1/2 percent (1979) rate. From the results of that survey he determined an appropriate cost of equity for Company was 12.82 percent to 18.97 percent, using 450 basis points as a risk allowance.

Staff challenges the validity of a survey which did not include a random sample of the entire population of investors, which did not include a statistically significant or verifiable response, and which was prepared by an expert who normally testifies for utilities in rate proceedings. Staff also challenged the underlying assumption of Dr. Soldofsky's methodology, i.e., "that the spread between interest rates and utility common stocks is constant and positive in favor of stocks." (S. Br. 130). Staff's witness, Dr. Smith, testified that "it is possible for debt to cost more than common equity because investors perceive that at the moment investments in common equity are less risky than investments in long-term debt or preferred stock." (Tr. 1285).

4. Maintenance of "Times-Interest-Earned After-Taxes Level".

Dr. Soldofsky analyzed the after-tax coverage, the rate of return on capitalization and net worth, and the degenerative effects of offering new shares below book value to arrive at a determination that the rate of return needed by Company to maintain its "AA" bond rating ranged between 15.11 and 15.91 percent. The analysis compared Company's after-tax coverage to that of other utilities with "AA" or "A" bond ratings.

Staff argues that Dr. Soldofsky's application of coverage principles is not only inappropriate in a ratemaking proceeding but also was inaccurately determined: interest coverage is to be measured on net earnings before income taxes. His calculations also show that Company is least likely of the utilities surveyed to lose its AA bond rating; Company's 2.8 coverage ratio was higher than all but two of the 13 AA companies surveyed.

Company responds that it would be derelict in its duties if it ignored coverage, referring back to the testimony of Mr. Shaw concerning the need to maintain certain coverages as preconditions for issuance of mortgage bonds, debentures and preferred stock.

Summary.

Dr. Soldofsky concluded, after examining various approaches to the question of determining a "fair rate of return" that a conservative estimate of Company's average cost of common equity before issuance costs was 15.5 percent. A 5 percent adjustment for issuance cost on all outstanding equity produced a recommended 16.8 percent rate of return.

Staff characterizes Company's evidence as "nothing more than a plea for excessive returns," and urges the Commission "to look elsewhere for substantial

and credible evidence" to support a finding as to a fair rate of return. (S. Hr. 93 and 156). That evidence can be found in the testimony of Dr. Caroline Smith, Senior Consultant with J.W. Wilson and Associates, Staff says. Dr. Smith based her testimony on the principle that the return on equity allowed Company should equal the cost of that equity and that the DCF model accurately determines that cost. The DCF model focuses on investor requirements, taking into account intra-industry risk differences, and measures the total return to shareholders in terms of dividends and capital gains. Regulators should allow utilities to earn a rate of return equal to the cost of the utility of obtaining common equity in the marketplace, she stated, so that the price of a utility's common stock is driven toward book value and the ratepayers avoid the extra expense that may result when market price exceeds book value and excessive earnings are capitalized.

Dr. Smith examined historical information, as well as recent money market data, in her application of the DCF model, attempting to determine the extent to which recent fluctuations in electric utility money markets (caused by the 1979 Three Mile Island incident) and the rapid climb in interest rates (peaking in mid-1980) have permanently affected Company's equity costs. The extent to which recent inflationary conditions have affected embedded senior security costs was also considered.

Dr. Smith first determined a dividend yield of 11.31 percent, based on Company's indicated dividend rate as of October 31, 1980, and the average of Company's high and low common stock prices during the five-month period between May and October, 1980.

Dr. Smith then undertook a statistical study of the relationship between dividend yields and historical growth rates for electric and combination

utility companies to determine an appropriate future growth rate. The study was thought necessary to determine investors' anticipation of Company's growth rate in the context of industry-wide conditions and the unique circumstances of Company. It is necessary to examine data from the industry as well as the Company's data because a company's growth rate may be influenced by a series of favorable or unfavorable factors, unique to a certain period of time, and investors will often compare a company's growth rate to that experienced within the industry to identify abnormalities that may have affected the individual company's growth rate and should be considered either unique to the Company or non-recurring. Dr. Smith's study has identified certain financial circumstances that are uniquely applicable to Company's common stock and has determined Company's common equity cost in that context. Staff argues that this approach more accurately measures the cost of capital to a particular company than estimating growth on a single company basis.

Dr. Smith estimated Company's cost of equity capital for utility operations at 13.5 to 14.2 percent, which reflects her determination that the cost of equity capital to the industry as a whole has risen (from 12.8 percent before the Three-Mile Island incident to 13.2-14.5 percent recently) and that investors are expecting a return of approximately 11.9 to 12.6 percent on the book value of Company's common stock over the long term.

Dr. Smith then adjusted her range by including an allowance of five to ten basis points for costs associated with the issuance of new stock but made no allowance for market pressure. Market pressure, she stated, has an expected value of zero and can work for the benefit or detriment of stockholders. Dr. Smith established the issue cost by analyzing Company's actual expense of

(ISCC September 15, 1981) at p. 45, citing, Re Davenport Water Company, 76 PUR3d 204 (ISCC 1968). The DCF model has been considered a "sound basis for determining Company's cost of capital." Id. at 46. Any methodology adopted by the Commission must be a result of "reasoned consideration" and "substantial evidence." Permian Basin Area Rate Cases, supra at 792; General Telephone Company of the Midwest v. Iowa State Commerce Comm'n, 275 N.W.2d 364, 370 (Iowa 1977).

After considering all of the evidence in the record of this proceeding, we have decided to again rely upon the standard DCF model to determine Company's cost of capital. There are, however, three calculations of the "standard" DCF model in the record. Mr. Shaw calculated a 16.2 percent return. Dr. Soldofsky calculated a 13.8 to 15.1 percent return and Dr. Smith calculated a 13.5 to 14.2 percent return. The variations in results appear to be mainly attributable to prediction of the growth rate. We find that Dr. Smith's sampling technique has produced an unreasonably low growth rate and Company's estimate of growth rate is somewhat optimistic. We will therefore find the cost of common equity to be 15 percent.

We also finds that the record supports an adjustment for issuance costs. Company normally increases its common equity by about 11 percent per year. We determine Company's issuance expense by examining actual expenses incurred by Company in issuing new stock. Adjustment of the return to include an issuance allowance produces a return on equity of 15.166 which the Commission determines is fair and reasonable.

Using the average capital structure decided upon earlier in this decision, with average cost of preferred and preference stock at 9.04 percent and average cost of long-term debt at 7.46 percent, the overall rate of return allowed Company will be 10.57 percent.

DOCKET NO. RPU-88-10

STATE OF IOWA

DEPARTMENT OF COMMERCE

UTILITIES DIVISION

IN RE: IOWA POWER AND LIGHT COMPANY	DOCKET NO. RPU-88-10

FINAL DECISION AND ORDER

(Issued June 1, 1989)

APPEARANCES:

JAMES R. MARET, GARY D. STEWART, RONALD C. POLLE, and ALEXIS K. WOOTKE, Consumer Advocate Division, Department of Justice, Lucas State Office Building, Des Moines, Iowa 50319, representing the Consumer Advocate Division.

CHARLES R. MONTGOMERY, Senior Attorney, Iowa Power and Light Company, 666 Grand Avenue, PO Box 657, Des Moines, Iowa 50303; SHEILA K. TIPTON, DAVID J. LYNCH, Bradshaw, Fowler, Proctor & Fairgrave, 1100 Des Moines Building, Des Moines, Iowa 50307; and ROBERT G. ALLBEE, Ahlers, Cooney, Dorweiler, Haynie, Smith & Allbee, Suite 600, 100 Court Avenue, Des Moines, Iowa 50309, representing Iowa Power and Light Company.

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1. VALUATION, § 287 — Working capital — Definition for rate-making purposes — Revenue and expense lag.

[IOWA] "Working capital" was defined, for utility rate-making purposes, as the amount of capital that investors were required to put into a business, over and above the investment in plant and intangibles, to cover any gap between the cash expenditures incurred in production and delivery of services and the collection of revenues from service sales.
p. 148.

2. VALUATION, § 301 — Working capital — Materials and supplies — Fuel supplies — "Safety net" standard — Coal inventory.

[IOWA] In calculating the working capital requirement of an electric utility, the commission adopted a 90-day supply, based on average daily burn, as the appropriate level of coal inventory; a 90-day inventory was deemed sufficient to provide the utility with a safety net in the event of unexpected plant outages; use of the average daily burn, instead of the highest three months of burn, was appropriate for calculating inventory requirements because outages would likely occur on a random pattern, rather than only in high demand months.
p. 149.

3. VALUATION, § 293 — Working capital — Factors affecting allowance — Determination of revenue lag — Use of proxy as substitute for actual lead-lag days — Reliability.

[IOWA] In an electric rate case, the commission found that use of a utility-specific study, in which actual lead-lag days were measured, was preferable for a determination of revenue lag in the calculation of cash working capital, but held that a proxy could be used if its reliability as a substitute was demonstrated; the commission allowed the statewide average (20.6 days, instead of 25.9 days proposed by the utility) in computing revenue collection lag, where the utility's method (which used an average number of days between the debit and credit of revenue to accounts receivable as a proxy for the time between the meter reading and customer payment) was proved in this case to be an inadequate measure for the amount of

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Re Iowa Power and Light Company

Docket No. RPU-88-10

Iowa Utilities Board
June 1, 1989

OPINION and order authorizing an electric utility to revise its rates and directing the utility to use a gross-up method to account for income tax liability on contributions in aid of construction.

Power made a profit in every year since Cooper went in service. (Tr. 1507-09). Consumer Advocate also disputed Iowa Power's claim that the non-energy Cooper expenses satisfy the criteria for automatic recovery because the expenses are capacity related. (Tr. 1508). It argued non-energy expenses, such as investment and the cost of capital invested, do not vary with a generating unit's energy production. Consumer Advocate contended that non-energy Cooper expenses cannot be distinguished from the non-energy expenses of owning and operating any other power plant.

[34] The annual operating expenses at Cooper are approximately 45 percent of Iowa Power's annual operation and maintenance expenses (excluding EAC-related costs). These are substantial expenses and should not be put into a category where they are presumptively deemed allowable as an automatic adjustment clause. Furthermore, the Board's approval of Iowa Power's proposal would create a standard that most Iowa utilities could meet with their minority interests in generating stations. Large portions of utility budgets would become eligible for automatic recovery without the scrutiny a rate case provides. Therefore, the Board will reject Iowa Power's proposal to recover automatically all payments made by Iowa Power to the Nebraska Public Power District for power and energy from the Cooper Nuclear Station consistent with its precedent. *See Re Iowa Power & Light Co.*, 92 PUR4th 299 (Iowa U.B.1988).

However, Iowa Power has raised some generic questions as to the role of expedited recovery mechanisms. Therefore, the Board will, through initiation of a formal investigation, direct its staff to pursue further study of this issue.

C. CLASS COST-OF-SERVICE STUDY AND RATE DESIGN

Iowa Power's class cost-of-service study was performed by Iowa Power witness Dickey. (Tr. 842; Ex. 17). Consumer Advocate analyzed Iowa Power's study and found no significant difference between Iowa Power's study and its own. Iowa Power's study is the best and most current cost-of-service information available and should be used for rate design purposes in this proceeding. The Board will accept Iowa Power's class cost-of-service study and rate design.

VI. RATE OF RETURN

The parties are in agreement as to all issues regarding Iowa Power's rate of return except the return on common equity. The Board's determination of the fair rate of return on common equity is a question of fact which requires a consideration of all facts and circumstances.

A. RETURN ON COMMON EQUITY

Iowa Power determined the cost of common equity to be in the range of 13.5 to 15.5 percent and proposed that the Board approve a 14.25 percent cost of common equity. Iowa Power supported its proposed return with the testimony and exhibits of three witnesses: Dr. Vander Weide, Mr. Meyer, and Mr. Glahn.

Iowa Power witness Vander Weide employed two methods for measuring the cost of common equity, the discounted cash flow (DCF) method and the risk premium method. Dr. Vander Weide employed the following DCF model:

$$k' = \frac{d_1(1+k')^{.75} + d_2(1+k')^{.50} + d_3(1+k')^{.25} + d_4 + g}{P_0(1-SC)}$$

P_0 = Current market price of the stock:

d_1, d_2, d_3 & d_4	=	The quarterly dividends based upon raising the latest quarter dividend in the first, second, third, or fourth subsequent quarter using the growth rate;
g	=	Expected dividend growth rate;
k'	=	Investors' required rate of return on equity; and
SC	=	Selling and flotation costs

(Ex. 18, Sch. 2 and Sch. 3).

The current market price of stock was determined by use of a simple average of the monthly high and low stock prices for the most recent three-month period preceding the filing, May, June, and July 1988. (Ex. 18, Sch. 2). In addition, Dr. Vander Weide argued that the DCF model will produce an appropriate estimate of a firm's cost of equity capital only if it recognizes that most industrial and utility firms pay dividends quarterly (Tr. 937). Therefore, his method employed a quarterly compounding DCF model. The growth component of his DCF model was estimated by using the consensus analysts' estimates of future earnings per share (EPS) growth reported by the Institutional Broker's Estimate System (IBES), along with the five-year earnings per share growth estimate of *Value Line*. (Tr. 937; Ex. 18, Sch. 3). Dr. Vander Weide criticized use of historical data as stale and incapable of producing a realistic estimate of investors' current return requirements. Finally, Dr. Vander Weide included flotation costs to allow the company to recover current carrying costs associated with flotation expenses. (Tr. 940). Dr. Vander Weide applied this DCF model to a group of companies comprised of Iowa Resources and five other Iowa electric utilities that investors would consider to be of comparable risk. (Tr. 942). The average DCF cost of equity for the group of comparable firms was 13.4 percent. (Tr. 944).

Dr. Vander Weide also utilized a second method of estimating Iowa Power's cost of equity, the risk premium methodology. (Tr. 944). Dr. Vander Weide first performed a study of the comparable returns received by bond and stock investors over the last 51 years, estimating the returns on stock and bond portfolios by using stock price and dividend yield data on the Standard & Poor's (S&P) 500 and bond yield data on Moody's A-rated Utility Bonds. (Tr. 944). The S&P 500 stock portfolios grew at an average rate of 9.81 percent per year while the Moody's A-rated utility bond portfolio grew at an average rate of 4.17 percent per year, a difference (risk premium) of 5.64 percentage points. (Tr. 944-945). Dr. Vander Weide also conducted a second similar study using stock data from the Standard & Poor's 40 utilities rather than the S&P 500. (Tr. 945). The S&P 40 Utilities stock portfolios exceeded the return on the Moody's A-rated utility bond portfolio by 4.66 percentage points. (Tr. 945). Finally, Dr. Vander Weide testified to risk premium studies performed by other economists supporting a return on equity 4 to 5 percentage points above the expected yield on long-term debt issues. (Tr. 950). Dr. Vander Weide found Iowa Power's expected yield on debt issues to be 10.5 percent, yielding an investor-required return on equity of 14.5 percent to 15.5 percent. (Tr. 951).

Iowa Power witness Glahn proposed a 14.0 percent return on common equity. (Tr. 173). He reasoned that on July 14, 1988, Iowa Power sold $70 million of 30-year First Mortgage Bonds. These bonds have a yield of 10.5 percent and Mr. Glahn adopted this percentage as the expected yield on long-term debt issues. (Tr. 173). To this amount, Mr. Glahn added 350 basis points as his evaluation of the risk premium of equity over debt. (Tr. 173). Mr. Glahn then added an additional 25 basis points to

recognize the risk in Iowa Power's purchased power contract with the Nebraska Public Power District for energy and capacity at Cooper Nuclear Station, thereby arriving at an overall return of 14.25 percent. (Tr. 173).

Iowa Power witness Meyer tested Iowa Power's proposed 14.25 percent return on common equity for reasonableness under a risk premium methodology. (Tr. 1046-77). Mr. Meyer also tested the reasonableness of the requested return against market requirements for Iowa Power's bonds. He testified that investors in utility stock require a total return of from 3.0 percent to 5.0 percent more than the yield available in the marketplace for bonds. (Tr. 1076). The current yield on new long-term debt for Iowa Power's bonds is 10.516 percent. (Tr. 1075). An investor would require a return of 13.516 percent to 15.516 percent on common stock. (Tr. 1076).

Consumer Advocate witness Bittner estimated that Iowa Power's cost of equity is 11.6 percent. (Tr. 1152). Mr. Bittner used the following DCF model:

$$\text{Return on equity} = \frac{\text{Dividend per share}}{\text{Market price per share}} + \text{growth rate}$$

(Tr. 1153). Consumer Advocate contended this model is appropriate even though dividends are paid quarterly because the utility receives earnings daily and has use of the money, thereby earning a return on reinvested earnings. (Tr. 1155). The quarterly DCF model used by Dr. Vander Weide, according to Consumer Advocate, inflates the dividend yield by increasing the actual dividends by the growth rate, increasing the dividend again by the cost of equity estimate and reducing the actual market price by overstated flotation costs and market pressure. (Tr. 1182-85) Consumer Advocate argued the quarterly DCF model does not recognize that dividends are paid in arrears after the collection of earnings from customers and serves to provide a second return on dividends that have been paid to stockholders. (Tr. 1155). Consumer Advocate also adjusted its cost of common equity for flotation costs and brokerage fees but found the amount to be insignificant. (Tr. 1182-83). An adjustment for market pressure was rejected by Consumer Advocate since it claimed there was no evidence introduced that it exists. (Tr. 1184).

Mr. Bittner first estimated the cost of equity for Iowa Resources and the same group of five Iowa-based investor-owned electric utilities used by Dr. Vander Weide for the period October 23, 1987, through March 31, 1988, the period from the October 1987 market crash to the Board's decision in Docket No. RPU-87-2, using each utility's indicated annual dividend, an average of the Friday closing prices, and his estimates of growth rates for each utility based on his analysis of each company's realized growth from 1973 through 1987. (Tr. 1161). Mr. Bittner used a log-linear least squares regression analysis and analyzed the Iowa utilities' actual past financial performance. (Tr. 1157-58). Application of his DCF method produced a pre-decision cost of equity of 11.5 percent for Iowa Resources and 11.5 percent average for the Iowa group. (Tr. 1160-64). Mr. Bittner subsequently calculated the dividend yields for the period April 11, 1988, through September 30, 1988 (the post Docket No. RPU-87-2 decision period). (Tr. 1164). Iowa Resources' dividend yield increased from 8.3 percent to 9.8 percent, a 150 basis point increase. (Tr. 1164). Mr. Bittner asserted this increase does not mean that Iowa Resources' cost of equity increased by 150 basis points. He claimed the post-decision period is too short to provide a reliable basis for an historical estimate of growth. The average dividend yield of the Iowa group increased 0.1 percent, from 8.4 to 8.5 percent, during the post-decision period. (Tr. 1166). Mr. Bittner argued this increase is a more reliable number and added 0.1 percent to his pre-decision estimate to arrive at his 11.6 percent recommendation (Tr. 1166). The 11.6 percent estimate implies a growth rate of 1.8 percent, which, according to Consumer Advocate, is consistent with or higher than all of *Value Line's* forecast five-year growth rates published in April, July, and October 1988. (Ex. 119).

In addition, Mr. Bittner discussed alleged defects in the risk premium method. In the historical study, returns on stocks and bonds are

compared and the average difference for the study period is the risk premium. Mr. Bittner pointed out that such risk premiums are volatile and vary significantly over time thus making them sensitive to the selection of the study period. He argued historical risk premiums do not provide investors a reliable basis upon which to evaluate a particular firm's potential. (Tr. 1197). In a second type of study advanced by Iowa Power, the risk premium was estimated by subtracting current yields on low risk bonds from estimates of the cost of equity for a group of companies. Consumer Advocate observed the defect in this study to be that the cost of equity estimates used were overstated, thus inflating the risk premiums. (Tr. 1197).

1. *DCF Model*

[35] In *Re Northwestern Bell Teleph. Co.*, Docket No. RPU-88-6, Feb. 1, 1989 (Iowa U.B.) and in *Re Iowa Pub. Service Co.*, Docket No. RPU-87-6, Feb. 20, 1989 (Iowa U.B.), the Board utilized the standard DCF formula to compute the return on equity. This model is used to predict the return an investor may reasonably expect from an investment under actual stock market conditions by measuring the dividend yield and adding an investor-expected growth rate in dividends. The continuously compounding model rather than the discrete approach advanced by Iowa Power has been consistently used by the Board since the company has the funds available on a daily basis. The Board will not deviate from its precedent and will use the standard DCF formula as the basis for determining return on equity. The adjustment proposed by Iowa Power will not be accepted.

[36] In addition, the flotation and brokerage adjustments made by Dr. Vander Weide will not be accepted. No new stock has been issued nor is there any evidence of Iowa Power's intent to issue stock. Iowa Power's market pressure adjustment will also be rejected since it is speculative and not supported by the evidence. *See Re Iowa Southern Utilities Co.*, Docket No. RPU-85-11, Feb. 25, 1986 (Iowa U.B.).

2. *Dividend Yield*

[37] The dividend yield in the DCF formula is the result of dividing the dividend per share by the market price per share. The dividend yield for Iowa Resources increased from 8.3 percent to 9.8 percent in the period April 11, 1988, through September 30, 1988. (Tr. 1164). While this 150 basis point increase in the dividend yield was due in part to the Board's rate reduction decision in Docket No. RPU-87-2 and the response of the financial community to the decision, the Board finds that the most recent yield of 9.8 percent is the most representative available to use as an indicator of investor expectations. The more recent market prices following the Board's decision have affected the investor's perception of the value of Iowa Resources' stock and deserve recognition in the formulation of Iowa Power's future allowable return.

3. *Growth Rate*

[38] The Board will adopt a growth rate of 3.4 percent. This growth rate is the rounded average of: 1) the average of Iowa Resources' 1973-87 internal growth rate of 3.774 percent (Ex. 102, Sch. B, p. 1 of 2) and the 14-year dividend growth per share of 4.4 percent (Ex. 102, Sch. B, p. 2 of 2), and 2) the average of the *Value Line* and Institutional Broker Estimate System (IBES) forecasted growth rates. (Ex. 18, Sch. 3). In the *Northwestern Bell* rate case, Docket No. RPU-88-6, February 1, 1989, the Board found that the adjusted IBES analysts' forecasts provide as good, if not better, evidence of future market price and growth than the historical data used in Consumer Advocate's calculation of the growth rate. In this proceeding, the parties provided an excellent appraisal of the relative merits of forecasted versus historic data and the defects in each approach. Therefore, the Board will adopt a blended approach, which recognizes both the historical and forecasted data, to diminish the effects of perceived defects in each approach.

4. *Return on Equity*

[39] Utilizing the standard DCF formula with the numbers adopted in previous sections produces an allowable return on equity of 13.2 percent.

5. *Risk Premium*

[40] In *Re Iowa Pub. Service Co.*, Docket No. RPU-87-6, Feb. 20, 1989 (Iowa U.B.), the Board used a risk premium approach to test the reasonableness of the return reached by the DCF method by adding 250-300 basis points to the bond yield applicable to IPS. In July of 1988, Iowa Power sold $70 million of 30-year First Mortgage Bonds having a yield of 10.516 percent. (Tr. 1075). While the Board will not mechanically employ 250-300 basis points as the risk premium in each case, this record also supports this range as appropriate. (Tr. 1076). Adding 250-300 basis points to the 10.516 percent yields a range of 13.0-13.5 percent and supports the 13.2 result reached by the Board. It is clear through this analysis that the 11.6 percent recommended by Consumer Advocate is too low. A return on equity of 11.6 percent for Iowa Power would only provide a risk premium of 110 basis points over the return allowed on bonds.

VII. RATE CASE EXPENSE

[41] On March 13, 1989, Iowa Power filed an itemized accounting of its actual expenses incurred in litigating Docket No. RPU-88.10 as required by IOWA CODE § 476.6(8) (1989) and IOWA ADMIN. CODE 199.7.3 (1989). The total cost to litigate the rate case was $771,239, which includes Board and Consumer Advocate expenses. Consumer Advocate had no objection to the rate case expenses. The Board will allow the recovery of the costs of the litigation expenses over a three-year period as reasonable and just.

VIII. FINDINGS OF FACT

1. It is reasonable to adjust rate base to recognize a 90-day average, actual coal burn inventory for working capital purposes.

2. It is proper to adjust the billing cycle lag to eliminate the effects of Leap Year.

3. The evidence does not support adoption of Iowa Power's review of average daily accounts as a reasonable proxy to measure the amount of time from the end of the service period to customer payment.

4. It is reasonable to apply the statewide average of 20.6 days as proxy for the period between end of service and customer payment in computing revenue lag.

5. In this proceeding, Iowa Power's revenue collection lag to be reflected in rate base as working capital is 37.6 days.

6. The undepreciated balance in the retired Des Moines Power Station should be removed from rate base as not "used and useful" in providing service.

7. It is just and reasonable to allow Iowa Power to collect the undepreciated balance relating to the retired portion of Des Moines Power Station over a five-year period.

8. The portion of Des Moines Power Station to be refurbished should not be included in rate base since there is no definite plan for its use, and it is not expected to be used within a reasonable period of time.

9. Clean-up of PCBs at the Martha Rose plant is not a cost of removal of transformers and is not properly included in rate base.

10. It is reasonable to permit Iowa Power to collect the expenses associated with the clean-up of PCBs at the Martha Rose site over a three-year period commencing with approval of the rates.

11. It is reasonable to allow one-half of Iowa Power's proposed adjustment to reflect the estimated reduction in future sales levels to two customers who have installed cogeneration units.

12. It is reasonable to calculate the end-of-period customer changes in the Large General Service class (other than cogeneration LGS customers) based on the average use per customer.

13. It is reasonable for Iowa Power to recover one-half of the increase in total revenues less fuel costs associated with flexible rate discounts.

14. It is reasonable to allow recovery of the expenses associated with PayBack Plus

DOCKET NO. RPU-84-23

IOWA STATE COMMERCE COMMISSION

Iowa-Illinois Gas and Electric Company

Docket No. RPU-84-23

"ORDER APPROVING STIPULATION"

Issued August 29, 1984

Parties Served:

Mr. Edward J. Hartman
Vice President-General Counsel
Iowa-Illinois Gas & Electric Company
206 East Second Street
Davenport, IA 52808

Mr. James R. Maret
Consumer Advocate
Office of Consumer Advocate
Lucas State Office Building
Des Moines, IA 50319

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing document has been served this day upon all parties of record in this proceeding by mailing, by first class mail, to each such party a copy thereof, in properly addressed envelope with charges prepaid.

Date: 8-29-84

Dottie L. DeGraff

AUG 30 1984

STATE OF IOWA

IOWA STATE COMMERCE COMMISSION

IN RE:	)	
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY	)	DOCKET NO. RPU-84-23

ORDER APPROVING STIPULATION

(Issued August 29, 1984)

On May 11, 1984, Iowa-Illinois Gas and Electric Company (Company) filed with this Commission proposed gas tariffs identified as TF-84-179 and TF-84-180. TF-84-179 represents a revenue increase of 2.9 percent annually over current rates. TF-84-180 is an interim increase of approximately $6.141 million, or 80 percent of the proposed general increase. Company requested that these tariffs become effective on June 11, 1984.

On May 30, 1984, this Commission issued an order in Docket No. RPU-84-23 formally docketing the tariff proceeding and commencing an investigation of the reasonableness of Company's proposed tariffs.

On June 28, 1984, the Company and OCA filed a joint motion for the approval of a stipulation which was intended to resolve all issues at the Commission level and to preserve to the Company the right to appeal to the Iowa District Court for Scott County the same effective tax and JDIC issues which are currently pending in the appeal of its electric case. The parties requested Commission approval of the stipulation and that a hearing

date be set. On July 2, 1984, this Commission ordered that a hearing be held on July 9, 1984, to consider the stipulation.

On July 13, 1984, the Commission issued an order denying the stipulation based upon the findings that the inclusion of interim rates in an order also containing final rates was contrary to the purpose of interim rates and that there was no adequate assurance in the stipulation that the rates to be charged were just or reasonable.

On July 19, 1984, the Company and OCA filed a joint motion for approval of an interim rate stipulation establishing an agreed-upon level of interim rates and requesting a hearing date. On July 23, 1984, the Commission issued an order setting a hearing date of July 31, 1984, to consider the interim rate stipulation. Subsequent to the July 31 hearing, the Commission issued an order approving the interim rates stipulation which provided for a $5.275 million annual increase and reduction of the current negative adjustment for gas leases to zero.

On August 7, 1984, the Company and OCA filed a joint motion for approval of a final rate stipulation. Concurrent with this motion OCA filed a motion for an amendment to the procedural schedule. On August 9, 1984, the Commission issued an order setting a hearing date of August 21, 1984, and staying the procedural schedule until a final decision was rendered on the joint motion for approval of the final rate stipulation. A bench ruling was handed down on August 21 approving the final rate stipulation.

The final rate stipulation provides a final revenue requirement of $217,594,000. For purpose of the final rates, the current negative

adjustment to the PGA of 0.182 percent for gas leases will be reduced to zero. The final revenue requirement represents a reduction from the approved stipulated interim revenue requirement for (a) $188,000 attributable to imputing an interest deduction to the portion of rate base financed by the JDIC, and (b) $828,000 attributable to the difference between deferred federal income taxes computed at an effective rate of 41.63 percent and at the statutory rate of 46 percent. Revised gas base rates and PGA will be determined to be effective for gas meter readings on and after Commission approval of rate schedules to be filed implementing rates in accordance with the final rate stipulation. The final gas rates will be determined on the basis of annual revenue requirements for the 12-month calendar test period ending December 31, 1983, as adjusted. The Company will have 30 days from approval of the final rate stipulation in which either (a) to file final rates in accordance with the final rate stipulation or (b) to appeal to the Iowa District Court for Scott County the JDIC and effective tax rate issues.

Having reviewed the stipulation and the record supporting the stipulation, we shall approve, with great reservation, the final rate stipulation. We are greatly concerned about the effect of the current rate structure on the gas consumer. Natural gas sales in Iowa continue to show a marked decline while the volume of gas purchased by gas companies has either remained constant or increased. Due to technological advances in methods of conservation, changes in the structure of family housing, and fuel switching, gas consumption per customer appears to be in decline. We

need only look at the statistics provided by the Company in its offered testimony to illustrate this problem. While Company's residential service increased by 2700 households, actual residential sales declined 10 percent. Therein lies the dilemma--who will pay for the gas not consumed? If the average customer must pay higher prices for using less gas, why should the customer conserve at all? Fixed costs cannot continue to be spread among remaining volumes. Furthermore, we do not believe that any increase attributable in part to reduced gas sales has a negligible impact on consumers. Whatever the percentage increase, it is both unjust and unreasonable to ask consumers to pay for gas they have not used. The time has come for an adequate and innovative solution to this serious problem. In the future, gas distribution companies must present viable alternatives to this Commission concerning the spreading of constant fixed costs--the "business as usual" method of spreading these costs over dwindling sales volumes is simply no longer workable. In order for customers to be serviced and for the gas distribution companies to remain viable in this state, the changing market conditions must be addressed fully and promptly.

IT IS THEREFORE ORDERED:

1. The joint motion for approval of the final rate stipulation is approved.

2. Company shall file tariffs implementing final rates consistent with the stipulation. The final rates will become effective upon approval.

3. On or before the expiration of 30 days from the date of this order, Company shall submit for consideration and approval a plan by which refunds shall be made to customers in accordance with the stipulation and attached schedules. If no refunds are required, Company shall file a statement indicating no refunds are necessary and submit supporting data for its conclusion.

IOWA STATE COMMERCE COMMISSION

Chairperson

Commissioner

ATTEST:

Executive Secretary, Assistant To

Commissioner

Dated at Des Moines, Iowa, this 29th day of August, 1984.

STATE OF IOWA

BEFORE THE IOWA STATE COMMERCE COMMISSION

IN RE:	)	
	)	
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY	)	DOCKET NO. RPU-84-23
	)	

FINAL RATE STIPULATION

ARTICLE I

Background And Summary

On May 11, 1984, Iowa-Illinois Gas and Electric Company (Company) filed proposed gas tariffs identified as TF-84-179 and TF-84-180. TF-84-179 represented a revenue increase of $7.675 million annually or a 3.6 percent annual increase above the rates which were then in effect. TF-84-180 represented an interim increase of approximately $6.141 million, approximately 80 percent of the proposed general increase requested.

On May 30, 1984, the Commission docketed the case as a formal proceeding and instituted an investigation into the reasonableness of both the interim and proposed final rates.

A prehearing conference was held on June 4, 1984, at which time the possibility of settlement and the establishment of a procedural schedule were discussed on the record. Upon the parties' waiver of the requirement of a proposed decision if less than two Commissioners are present

at all phases of the evidentiary proceedings, the procedural schedule was amended. Consumer comment hearings were held on June 7 in Davenport and on June 13 at Fort Dodge, Iowa. There are no formal intervenors.

On August 3, 1984, the Commission approved an INTERIM RATE STIPULATION which provided for interim gas rates to be set in this Docket to produce annual revenues of $218,610,000, or a revenue increase of $5.275 million above the rates previously in effect and a reduction of the current negative adjustment to the PGA of 0.182 for gas leases to zero.

ARTICLE II

Purpose

This Final Rate Stipulation has been prepared and executed by the signatory parties for the purpose of resolving all issues before the Commission in Docket No. RPU-84-23 but reserving to Company the right, within thirty days of the Commission's order approving this Final Rate Stipulation, to either file rates in accordance with this Stipulation or to file an appeal to the Iowa District Court for Scott County regarding the same Job Development Investment Credit (JDIC) and effective tax rate issues which are currently pending in the appeal of Iowa-Illinois'

electric case, Docket No. RPU-83-22 (Scott County District Court No. 69076).

The attached Schedules represent a final revenue requirement of $217,594,000. For the purpose of the final rates, the current negative adjustment to the PGA of 0.182 for gas leases shall be reduced to zero.

The final revenue requirement stipulated herein represents a reduction from the approved stipulated interim revenue requirement for (a) $188,000 attributable to imputing an interest deduction to the portion of rate base financed by the JDIC and (b) $828,000 attributable to the difference between deferring federal income taxes at an effective rate of 41.63 percent rather than at the statutory rate of 46 percent.

In its April 25, 1984 Order in Docket No. RPU-83-22, the Commission adopted an adjustment to impute an interest deduction to the portion of rate base financed by the JDIC, finding such adjustment imputes the tax liability for the purpose of setting rates and is not a determination of actual tax liability. In the same Order, the Commission adopted an adjustment to calculate deferred federal income taxes at a rate of 41.63 percent rather than at the 46 percent statutory rate after concluding that Treasury Regulation Section 1.167(l)-1(h)(1)(iii) permitted the

deduction of state income taxes calculated in accordance with state law in the calculation of federal deferred income taxes using straight-line depreciation. Iowa-Illinois disagreed that the Commission should make these two adjustments and appealed the two issues to the Iowa District Court for Scott County. Iowa-Illinois continues to disagree that such adjustments should be made in this Docket and intends to appeal those same issues to the Iowa District Court for Scott County pursuant to the provisions of Article X of this Final Rate Stipulation. By approving this Final Rate Stipulation, the Commission can facilitate administrative and judicial efficiency by permitting these two identified issues in this Docket to be consolidated and heard with the two identical issues in the appeal of Docket No. RPU-83-22.

ARTICLE III

Joint Motion

Upon execution of this Final Rate Stipulation, the signatory parties shall forthwith file the same with the Commission together with a joint motion requesting that the Commission issue an order approving this Final Rate Stipulation in its entirety, without condition or modification.

ARTICLE IV

Condition Precedent

This Final Rate Stipulation shall not become effective unless and until the Commission enters an order approving the same in its entirety, without condition or modification.

ARTICLE V

Privilege and Limitation

This Final Rate Stipulation is made pursuant to Iowa Code Section 17A.10 (1983) and Iowa Admin. Code 250--7.7(4) and 7.10(2) and shall become binding upon the signatory parties upon its execution provided, however, that if this Final Rate Stipulation does not become effective in accordance with Article IV above, it shall be null, void, and privileged. This Final Rate Stipulation is intended to relate only to the specific matters referred to herein; no signatory party waives any claim or right which it may otherwise have with respect to any matter not expressly provided for herein. It is specifically understood and agreed that neither the signatory parties nor the Commission shall be deemed to have approved, accepted, agreed or consented to any ratemaking principle or any method of cost-of-service determination, cost allocation, property valuation or rate design, underlying or supposed to underlie any of the provisions of this Final Rate Stipulation, or be

prejudiced thereby in any future Iowa-Illinois Gas and Electric Company rate proceeding or any other proceeding.

ARTICLE VI

Rate Periods

Revised gas base rates and PGA shall be determined to be effective for gas meter readings on and after Commission approval of rate schedules to be filed implementing rates in accordance with this Final Rate Stipulation. These rates shall continue in effect until changed in accordance with Chapter 476 of the Code of Iowa (1983), as amended, or further order of the Commission.

ARTICLE VII

Test Period

The final gas rates shall be determined on the basis of an annual revenue requirement for the 12-month calendar test period ending December 31, 1983, adjusted.

ARTICLE VIII

Revenue Requirements

For the purpose of this proceeding, the signatory parties stipulate that for the test year ending December 31, 1983, the Company's rate base, overall cost of capital and final revenue requirement are those shown on the Schedules attached hereto and made a part hereof.

ARTICLE IX

Rate Design

The Company filed rate design changes pursuant to a cost of service study. The signatory parties agree that the rate design changes proposed by the Company should be implemented.

ARTICLE X

Tariffs

Company shall have thirty (30) days from the date of the Commission order approving this Final Rate Stipulation in which to either (a) file final rates in accordance with this Final Rate Stipulation or (b) appeal to the Iowa District Court for Scott County the JDIC and the effective tax rate issues described herein and obtain a stay of the final rate level from the Commission or the Court, thereby continuing to collect the interim rates, $1,016,000 of which shall be collected subject to refund pending disposition of the two appealed issues. For the purpose of such an appeal, the evidentiary record regarding these two issues in Docket No. RPU-83-22 shall be adopted and deemed the record before the Commission in this proceeding, Docket No. RPU-84-23.

OCA shall not seek judicial review of this Final Rate Stipulation or the Commission order approving same nor shall it object to a stay of the final rate level being entered by

the Commission or the Court. OCA may, however, contest the Company's judicial appeal of said JDIC and effective tax rate issues.

The parties hereto shall urge the Commission to approve this Final Rate Stipulation as promptly as possible to enable appeal of the JDIC and the effective tax rate issues for consolidation with the appeal of the same issues from Docket No. RPU-83-22, currently pending before the Iowa District Court for Scott County in Case No. 69076.

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

By _____
Edward J. Hartman

By _____
Brent E. Gale

Attorneys for
Iowa-Illinois Gas and Electric Company
206 East Second Street
P. O. Box 4350
Davenport, Iowa 52808

Dated this 7th day of August 1984

OFFICE OF CONSUMER ADVOCATE

By _____
Daniel J. Fay, Attorney

Attorney for the
Office of Consumer Advocate
Lucas State Office Building
Des Moines, Iowa 50319

Dated this 7th day of August 1984

Full
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IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

Capitalization

Line No.	Description	($000)	Ratio	Cost of Capital	Composite Cost of Capital
	(1)	(2)	(3)	(4)	(5)
1	Long-term debt	$363,411	48.0%	9.05%	4.34%
2	Preferred and preference stock	101,308	13.3	9.64	1.28
3	Total long-term debt and preferred and preference stock	$464,719	61.3%		5.62%
4	Common equity	292,978	38.7	14.64	5.67
5	Total capitalization	$757,697	100.0%		11.29%

Full
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IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

Iowa Gas Rate Base and Gas Lease Investment
($000)

Line No.	Description (1)	Adjusted Rate Base (2)
1	Gas plant (includes land held for future use)	$126,099
2	Accumulated provision for depreciation and amortization	43,549
3	Net gas plant (excludes gas leases-net) (Line 1 minus 2)	$ 82,550
	Add working capital components:	
4	Prepaid gas supply	$ 8,806
5	Materials and supplies	1,141
6	Prepayments	220
7	Cash working capital	3,019
8	Post payments	(2,194)
9	Total working capital (Lines 4 through 8)	$ 10,992
	Deduct:	
10	Customer advances for construction	$ 896
11	Accumulated deferred ITC - 3%	293
12	Unclaimed refund amounts	10
13	Customer deposits	171
14	Residential conservation service reserve	546
15	Accumulated deferred income tax	10,291
16	Total deductions (Lines 10 through 15)	$ 12,207
17	Gas supply loan	$ 1,085
18	Total rate base (Line 3 plus Line 9 minus Line 16 plus Line 17)	$ 82,420
19	Investment in gas leases	1,899
20	Allowable rate base and gas lease investment	$ 84,319

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

Iowa Gas Net Operating Income
Test Year Ended December 31, 1983
($000)

Line No.	Description (1)	Adjusted Operating Income (2)	Additional Revenue (3)	Adjusted Operating Income Including Additional Revenues (4)	Line No.
1	Operating revenues	$213,335	$4,259	$217,594	1
	Operating expenses				
2	Operation and maintainence expenses	$196,852	$ 13	$196,865	2
3	Depreciation and amortization	4,104		4,104	3
4	Other taxes	2,683		2,683	4
5	Income taxes--Federal	2,783	1,768	4,551	5
6	Income taxes--State	581	403	984	6
7	Deferred taxes	(1,172)		(1,172)	7
8	Investment tax credit	59		59	8
9	Total operating expenses (Lines 2 through 8)	$205,890	$2,184	$208,074	9
10	Operating income (Line 1 minus Line 9)	$ 7,445	$2,075	$ 9,520	10

Full
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IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

Iowa State Commerce Commission - Docket No. RPU-84-23

Direct Testimony of Donald H. Shaw

Q. Please state your name, business address and position.

A. Donald H. Shaw. My business address is 206 East Second Street, Davenport, Iowa, and I am Vice President-Finance, and a Director, of Iowa-Illinois Gas and Electric Company.

Q. Please describe your education and business experience.

A. I received a Bachelor's Degree from Harvard College in 1942 and entered the U. S. Army in November of that year. During a three-year period of military service I was commissioned following a course at the Harvard Business School, and served for two years as a statistical officer, attaining the rank of captain.

In 1948, I received the Juris Doctor Degree from the College of Law at the University of Iowa.

From June 1948 to December 1955, I practiced law as an associate in the firm of Sidley & Austin in Chicago, Illinois.

I have been admitted to the Bar in Iowa and Illinois and am a Certified Financial Planner. I am also a Registered Investment Advisor under the Investor Advisors' Act, which is administered by the Securities and Exchange Commission.

Q. Is it possible to determine, under various assumptions, what return on common equity is required to assure a particular coverage level?

A. Yes.

Q. Can you illustrate this method?

A. Yes. We start by assuming a normal coverage objective of 2-3/4 to 3 times after income taxes and a capital structure similar to that of the Company at December 31, 1983, adjusted to include $25,000,000 of 11-1/2% First Mortgage Bonds issued in February 1984. This can be illustrated as follows:

Percent		Percent Capital Return
39.5	common equity x 18.0%	7.11%
12.7	preferred and preference x 9.7%	1.23%
47.8	long term debt x 9.2%	4.40%
		12.74%

12.74% Capital return / 4.40% debt interest = 2.90 times

Q. In terms of interest coverage requirements, what do you consider a minimum level of common earnings expressed as a rate on common stock equity?

A. Taking into account all present circumstances, about 18%. This is based, first of all, on a conclusion that the objective should be, under normal circumstances, after-tax coverage of long-term debt interest of 2-3/4

equity arrived at by adjusting for inflation occurring over the past 42 years. In other words, in terms of protecting the purchasing power during this inflationary period, the common stock investor would not be realizing earnings of 18% but earnings of 8.33%. Allowing for the dilution in realized earnings attributable to an estimated five percent cost of issuance of common shares, the real earnings rate to shareholders would not be 8.33% but 7.91%.

Q. According to this exhibit the Company added $31,545,000 to its common equity in 1983. If the Company is allowed an 18% rate of return on its common equity, under your method what would be the earnings rate on that new common equity added in 1983?

A. It would be earning at the rate of 8.33% because it was added in 1983 and had not been adversely affected by experienced inflation since its inclusion in the Company's capital base. That particular slice of capital would not be entitled to a higher return in future years either unless and only to the extent there is experienced inflation after 1983.

Q. What would happen to the overall rate of return on common equity in future years if inflation should cease?

experienced inflation, as demonstrated by this schedule, would meet these objectives.

Q. Do you have an opinion as to what minimum rate of return applied to such an adjusted book common equity would permit the on-going attraction of common equity by the Company and hence the attraction of needed senior capital as well?

A. Yes. I believe the minimum rate to accomplish these purposes would be about 8-1/2%. Of the total of 8-1/2%, the allowance for pure money cost is in the range of 3-3/4% to 4-1/4%. Pure money cost can be thought of as the rate of interest required in a non-inflationary economy to cause potential savers to defer enjoyment of use of their money in sufficient quantities to satisfy given capital requirements. The rate is affected by potential capital demands as well as by society's propensities or predispositions toward consumption (spending) or saving (deferred but enlarged consumption). The rate has often been estimated at or slightly below 3%. I believe the rate is currently higher than that, principally for three reasons. First, the potential saver realizes that return on investment (interest or dividends) is subject to income taxes and at incremental rates which are higher for most savers

than historically was the case; it thus takes a higher pure money cost to produce the deferred enjoyment through saving than it formerly did. Secondly, there are huge demands for capital (some of them connected with energy needs) for saving to satisfy, requiring a comparably high pure money cost to attract the funds required to meet them. Finally, society has been moving toward emphasis on satisfaction of individual and societal needs and desires in the short term (consumption) with relative neglect of long-term considerations. Society's emphasis on programs to minimize personal risk and hardship (such as Social Security) have lessened people's incentive to save against possible adversity while directing much of society's cash flow to current consumption. Thus, while capital demands are high, the personal savings rate is at all-time lows.

Much attention has been directed in the recent and current financial press to the high level which real interest rates have reached, often referring to the wide spread between current inflation rates and current interest rates. After discussing current conditions in the capital markets, Data Resources, Inc. in its "U. S. Forecast Summary" for November 1982 stated: "Assuming

these factors, one must conclude that the real level of interest rates will not return to the low figures that prevailed over most of the postwar period. The 9% peaks may be safely behind us, but a return to levels below 5% does not seem in the cards."

The allowance for risk can be viewed as compensation for the risk inherent in the common stock component of the Company's capital structure as compared with a riskless investment in securities of the United States Treasury. This risk for electric and gas utility companies is obviously higher than it has traditionally been. Many observers now consider it to be as great as the risk in the common equity of major industrial enterprises, such as those represented in the Standard & Poor's 400 industrial companies.

Of significance in estimating investor common equity risk premiums is the Ibbotson and Sinquefield study of the period 1926-1981 (Stocks, Bonds, Bills and Inflation: the Past and the Future, 1982 Edition), in which the authors find 6.1% as the historical achieved risk premium of Standard & Poor's 500 stocks over long-term U. S. Government bonds. A similar study (A Half Century of Returns on Stocks & Bonds) by Fisher and Lorie found an achieved risk premium of 5.6% over the

period 1926-1976. In the latter study, the authors also calculated the results on a consumer-price-level-adjusted basis and found a risk premium of 5.4%. The four co-authors of these two books have been associated with the Center for Research in Security Prices at the University of Chicago.

I consider the allowance for risk of the common equity of the Company appropriately to be in the range of 4-1/2% to 5-1/2%.

In a non-inflationary economy, an 8-1/2% return on common equity could be accommodated within an overall 6% rate of return, with bonds carrying an interest and preferred a dividend rate of about 4-1/2%.

Q. Please describe Exhibit 23 (DHS-4).

A. It is a statistical tabulation I have prepared which develops and shows the return on inflation-adjusted common equity of the Company actually earned in each year from 1960 through 1983. The common equity base has been adjusted, year-by-year, for inflation between 1941 and the year being studied. Column H shows the return on common equity as conventionally determined and Column I shows it in constant purchasing power values.

Q. Do you have any observations with respect to the figures in Column I?

A. The exhibit demonstrates that even in 1960 an adjustment upward of 41% in the common equity base was required in order to get a meaningful relationship between current common earnings and the historical common equity base. The financial results of the mid-1960's were favorably affected by stable price levels; high growth in electric and gas sales volumes; low unit construction and low energy (coal and gas) costs; low construction and financing requirements; accrual of fair value depreciation under Iowa judicial decisions; and corporate income tax reductions. The results were achieved despite reductions in rates in 1964 and 1965. For the 10 years 1960-1969 the earnings on adjusted equity averaged 9.8%. In no year since 1970, however, have they been as high as 8.0%, and for the last five years 1979-1983 averaged only 7.1%. The unadjusted earnings rate in 1983 was 28% above the 1960 level, but the adjusted rate in 1983 was 18% below it, showing the effect of high inflation rates during most of the period.

Q. Based on the method of estimating common equity required return which you have described, in your opinion what is a fair and reasonable return on common equity in this proceeding?

A. I believe that a return of 18% on the Company's common equity, as applied to an original cost rate base, would be fair and reasonable as determined under this method.

Q. Does your recommendation include an allowance for issuance expense and market pressure?

A. Yes.

Q. Is it necessary to apply an expense allowance to the entire common equity?

A. Yes. The whole of the equity in a corporation is derived from the capital that has been raised from the outside, and if there had been no expense connected with these outside issuances, the per share results (earnings and dividends) and the retained earnings would always be better on all of the corporation's outstanding shares. Let me illustrate. Assume that A starts a business that requires $10,000 of his money in the form of 1,000 shares of common stock valued at $10 each. The business prospers and over the course of thirty years Corporation A retains 50 percent of its earning and splits its stock several times, some of which A sells or gives away, making it a public corporation. Now Corporation A has 100,000 shares outstanding, each with a book value of $10.00 for total common equity capital of $1,000,000. Corporation A is earning 20% on its equity. If the

shares have a book value of $10.00 each and the earnings rate is 20%, the earnings per share will be $2.00.

Now let's assume the same set of facts, except one, for Corporation B, started as an identical business thirty years ago, enjoying success similar to Corporation A. Corporation B also required $10,000 at the outset and also paid out 50% of its identical earnings in cash, retaining the balance. It also had the same number of stock splits and had been made a public corporation through owner gifts and owner sales of stock. The difference between the two situations is that A had all the $10,000 in cash needed to start his business which thus had no expense of stock issuance, when formed or any time thereafter. B, on the other hand, did not have capital, and the cost of selling B Corporation's stock equalled 5% of the net proceeds of $10,000 received by B Corporation. B Corporation has from the beginning had 5% more shares outstanding, including all the original stock and all issued on stock dividends. So, with a unit value of $10 each, B Corporation issued 1,050 shares of common stock compared with the 1,000 Corporation A issued originally.

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

Iowa State Commerce Commission - Docket No. RPU-84-23

Direct Testimony of Peter C. Stimes

Q. Please state your name, occupation, and business address.

A. My name is Peter C. Stimes, and I am an Assistant Vice President of Duff and Phelps, Inc., 55 East Monroe Street, Chicago, Illinois 60603.

Q. Briefly describe your educational background and business experience.

A. In 1977, I received a Bachelor of Arts degree in history from the University of Chicago. In 1980, I received a Masters degree in Business Administration, also from the University of Chicago, with a specialization in Economics and an additional concentration in Finance.

I joined Duff and Phelps as a Security Analyst in 1981 and was promoted to the position of Assistant Vice President in December 1983. My primary responsibilities were (and still are) to analyze individual utility companies and their securities. This investment research process entails collection of economic and financial data affecting a company's earning power and financial position. I then analyze this information and make a judgment on the investment value of common stock or the credit standing of fixed income securities. My additional duties include preparing, assisting in the preparation of, and sponsoring

Q. Please describe the market based approach you employed in forming a judgment as to a fair rate of return on common equity for Iowa-Illinois' gas operations.

A. I analyzed investors' requirements using the familiar discounted cash flow or DCF model. This model states that the expected return to a common stock investor equals the prospective dividend yield plus market price appreciation resulting from growth in dividends per share.

Q. What companies did you use in your DCF analysis?

A. I made two studies. First, I considered a group of widely held, publicly traded, investor-owned natural gas utilities having comparable risk. In selecting my sample, I chose those companies with a Value Line Safety Rank of 2 or higher, which were publicly traded on the New York Stock Exchange, and which had a capitalization between one hundrad and five hundred million dollars. This corresponds to the approximate $150 million of capital invested in Iowa-Illinois' gas operations and the Company's Value Line Safety Rank of 2.

My second study was a DCF analysis directly applied to Iowa-Illinois.

Q. How did you compute the dividend yield for your DCF analysis?

A. The common stock dividend yield is the expected dividend rate divided by the stock price. To avoid distortion that could result from using a spot price, I used the average of monthly

high and low stock prices for the twelve months ended March 1984. For each company, the dividend rate used was the annual rate in effect at the end of March 1984. Both price and dividend data were the most current available at the time this testimony was prepared.

Dividend yield information is presented in Exhibit No. 15 and shows a yield of 10.7% for Iowa-Illinois.

Q. Should growth rates be based only on historical data?

A. No. The investor's relevant consideration is prospective growth, for that alone provides the basis for rising dividends and expected price appreciation. Furthermore, in recent years, inadequate authorized returns, dilution from below book sales of common equity, and inflationary expense increases typically limited both achieved returns and per share growth rates. In such instances, growth rates calculated on the basis of past achieved rates of return will understate present investor expectations.

Q. How did you determine appropriate growth factors?

A. Primarily, I relied on forecasts published in the Value Line Investment Survey. Value Line is one of the most widely circulated investment services in the nation. Because this investment research is so widely disseminated and because projections are generally in line with many other research publications, Value Line forecasts, whether they materialize

or not, represent a cross section of market expectations, which, in turn, are reflected in stock market prices.

In calculating a long term growth factor, I made use of the fact that a "sustainable" growth rate of per share book value, earnings, and, thus, dividends equals the product of the earned return on common equity, or ROE, multiplied by one minus the dividend payout ratio. The latter is often referred to as the earnings retention ratio.

I obtained an estimate of the earnings retention ratio from Value Line forecasts of '86-'88 dividends and earnings per share. I similarly obtained an ROE estimate from the current '86-'88 forecast of "percentage earned on common equity". However, I had to make an adjustment, since Value Line calculates its ROE's on period-end rather than average common equity. To the '86-'88 Value Line ROE projection, I therefore added back the mean difference between average and period end common equity returns based on the most recent five years of available data.

As an example, the Value Line '86-'88 projections for Iowa-Illinois''s dividends and earnings per share are $3.00 and $4.40, respectively. This equates to a payout ratio of .682, or a retention ratio of .318 (1 - .682). The published '86-'88 ROE projection is 14.5%, which, adjusted from a period end to average equity basis, is 15.2%. The product of

15.2% and .318 is 4.8%. Thus, a long term or sustainable growth expectation for Iowa-Illinois would be 4.8 per year.

Growth rate calculations for the eight comparison gas distribution companies are detailed along with Iowa-Illinois on Exhibit No. 16.

Q. Do investors take into account disparities between long term and short term growth rates?

A. Yes. For example, assume a company with 5 year anticipated growth of per share earnings and dividends of 10%, which is then expected to be followed by 6% "sustainable" growth thereafter. If the underlying cost of equity capital is 16%, the observed yield would be less than the 10% implied by subtracting from the cost of equity the long term 6% growth expectation. This is because the market price would incorporate and discount more rapid near term growth. However, if this observed market yield were, say, 9%, to which we added the 6% sustainable growth factor, the resulting 15% cost of equity would be deficient. By the same token, adding the near term 10% annual growth rate to the observed yield would result in a 19% overestimate of the cost of equity. Th correct growth factor would thus lie somewhere between the 10% near term and 6% long term growth rates.

Consequently, I also relied on Value Line for near term (6 year) growth factors. My estimate incorporates '80-'82 to

'86-'88 compound growth rates of dividends for Iowa-Illinois and six of the eight comparison companies. For the other two comparison companies Value Line provided only a 5 year '81-'83 to '86-'88 growth factor. For Iowa-Illinois, the near term annual growth rate in dividends is forecast at 5.0%.

Q. How did you determine a composite of long term and near term growth estimates?

A. I obtained a composite growth factor by assigning a two-thirds weight to the long term growth rate and a one-third weight to the near term growth projection. In the case of Iowa-Illinois, this weighting of 4.8% long term growth and a 5.0% near term pace produces a growth factor of 4.9%.

A similar procedure was applied to the eight comparison gas utilities and is set forth in Exhibit No. 16.

Q. Based on your calculation of yield and growth components, what is the market cost of common equity for Iowa-Illinois and the eight comparison companies?

A. Using a 10.7% yield and and 4.9% growth factor, the estimated cost of common equity for Iowa-Illinois is 15.6%. For the eight comparison natural gas utilities, the estimates, as set forth in Exhibit No. 17, range from a minimum of 15.2% to a maximum of 16.8%, with a mean of 15.8%.

Q. Are any further adjustments to the cost of equity required for ratemaking purposes?

A. A flotation or underpricing adjustment is necessary because the net proceeds of a common stock sale are typically 3%-5% below the amount paid by investors. However, the earned rate of return for the Company is based on book equity, which will, of course, therefore be lower than the market price paid for the common stock investment.

Q. Could you show this more concretely?

A. Yes. Please examine Exhibit No. 18. In this hypothetical example, a company starts operations and finances its investment in utility plant through an issuance of common equity with a market value of $1,000 to investors. The net proceeds to the company, however, are a lesser $950. With a 16% expected market return on investments of similar risk, (i.e., a 16% unadjusted cost of common equity), the total return requirement to investors is $160 (16% x $1000 market investment). For the company to have earnings of this same $160, though, the achieved return on book equity must be a higher 16.8% ($160 divided by $950 initial book equity). In the second year, a similar situation prevails.

The main point is that the return on book equity must exceed the market cost of common equity, by some 0.8% in this instance, even in the second period when no additional common stock is sold.

Q. What is an appropriate flotation adjustment for Iowa-Illinois?

A. I first considered the difference between the market price and net proceeds to the Company of common stock sales in the last few years. The last public sale of common stock was made in 1980 with the net proceeds some 3.6% less than the value of common stock purchased by investors. Common stock sold through the reinvestment of investor dividends has been issued at a price 5% below the market. Taking into account these factors and making allowance for market pressure, a 4% net underpricing adjustment is warranted.

The adjusted yield 'Y' is calculated as follows:

$$Y' = \frac{D}{P(1-f)}$$

where D is the annualized dividend rate, P is the average price, and f is the net underpricing adjustment. The adjusted yield for Iowa-Illinois is thus 2.60 ÷ [24.30 x (1-.04)] or 11.15%. Subtracting the actual yield from the adjusted yield equals 11.15% - 10.7% or .45%. This .45% is then added to the market cost of equity and produces a result of 16.05% (15.6% plus .45%).

Q. Are there any other factors to consider in determining an underpricing adjustment?